

Atty Dkt: IDF 1503
(4000-02900)

Patent

Listings of claims:

1. (Original) A method for managing data packets received on a plurality of Ethernet ports in a telecommunications integrated services hub having a wide area network interface to the Internet, comprising:

receiving a data packet at a first Ethernet port,

comparing the media access control target address in the data packet to a) media access control addresses assigned to the first Ethernet port, and b) the broadcast MAC address,

if the media access control target address in the data packet matches the media access control address of the first Ethernet port, using a routing protocol to forward the data packet to the wide area network interface to the Internet,

if the media access control target address in the data packet does not match the media access control address of the first Ethernet port, using a bridging protocol to forward the data packet to one or more of the Ethernet ports, and

if the media access control address in the data packet matches the broadcast MAC address, using a bridging protocol to forward the data packet to all of the Ethernet ports and using a routing protocol to forward the data packet to the wide area network interface to the Internet.

2. (Original) The method of Claim 1 wherein each Ethernet port comprises a local area network having one or more personal computers.

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3. (Original) The method of Claim 1 wherein said data packets are Internet protocol data packets.

4. (Original) A telecommunications integrated services hub comprising:
a plurality of Ethernet ports for receiving Internet protocol data packets, each port having an assigned media access control address,
a wide area network interface to the Internet,
a central processor having bridging software for bridging data packets between Ethernet ports and routing software for routing data packets to the wide area network interface,

means for comparing the target media access control address contained in a data packet to the media access control address assigned to the Ethernet port on which the data packet is received and to the broadcast address and (a) if the data packet target media access control address does not match the media access control address assigned to the Ethernet port on which the data packet is received, processing the data packet with the bridging software, (b) if the target media access control address matches the media access control address assigned to the Ethernet port on which the data packet is received, processing the data packet with the routing software, and (c) if the target media access control address matches the broadcast address, processing the data packet with both the bridging software and the routing software.

5. (Original) The apparatus of Claim 4 wherein each Ethernet port comprises a local area network having one or more personal computers.

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6. (Original) The apparatus of Claim 4 wherein said data packets are Internet protocol data packets.

7. (Original) A telecommunications integrated services hub comprising:
a plurality of Ethernet ports for receiving Internet protocol data packets,
a wide area network interface to the Internet,
bridging means for bridging data packets between Ethernet ports,
routing means for routing data packets to the wide area network interface,
selection means for receiving a data packet and automatically selecting one or both of said bridging means and said routing means based on content of said data packet.

8. (Original) The apparatus of Claim 7, wherein said selection means bases selection of said bridging means and said routing means on the target media access control address contained in said data packet.

9. (Original) The apparatus of Claim 8 wherein;
each Ethernet port has a media access control address,
said selection means compares the target media access address to the media access address assigned to the Ethernet port on which the data packet is received and to the broadcast media access address.

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10. (Original) The apparatus of Claim 9 wherein said selection means selects said bridging means if said target media access control address does not match said media access address assigned to the Ethernet port on which the data packet is received.

11. (Original) The apparatus of Claim 9 wherein said selection means selects said routing means if said target media access control address matches said media access address assigned to the Ethernet port on which the data packet is received.

12. (Original) The apparatus of Claim 9 wherein said selection means selects both said bridging means and said routing means if said target media access control address matches said broadcast address.